SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier

Tradename: CULR™ Art Pigment for Epoxy – Super White

Chemical characterisation: C.I. Pigment Whitze 6 and Calciumcarbonat in aqueous dispersion, contenting Polyglykol and 1,2-Propandiol.

1.2. Relevant identified uses of the substance or mixture and uses advised again

Relevant identified uses of the substance or mixture:

Industry sector: Industrial Performance Chemicals
Paints, lacquers and varnishes industry
Polymers industry
Printing Inks Industry

Type of use: Colourant preparation

1.3. Details of the supplier of the safety data sheet

Easy Composites Ltd
Unit 39 Park Hall Business Village
Stoke on Trent, ST3 5XA. United Kingdom.
Phone: +44 (0)1782 454499

Information to substance / mixture:

Division: Technical
E-mail: technical@glasscastresin.com

1.4. Emergency telephone number

Emergency CONTACT (Office Hours) Phone: +44 (0)1782 454499

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance / mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Categoryof danger	Category HazardSymbol	H-Phrases
---	---	---

Not a hazardous substance or mixture.

2.2. Label elements

Labelling according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Not a hazardous substance or mixture.

Additional Labelling:

EUH 208 contains mixture of: 1,2-Benzisothiazol-3(2H)-one,
mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one
and 2-methyl-2H-isothiazol-3-one(3:1).
May produce an allergic reaction.

EUH210: Safety data sheet available on request.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1 % or higher.
No hazards to be specially mentioned.

SECTION 3: COMPOSITION / INFORMATION TO INGREDIENTS

3.1. Mixtures

Hazardous ingredients:

Alcohols, C16-18 and C18-unsaturated, ethoxylated (8 EO)
Concentration: ≥ 5,3 - ≤ 12,6 %
CAS-Number: 68920-66-1
EC-Number: 500-236-9

GHS classification EC:

Skin irritation	Category 2	H315
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 3	H412

M-Factor (Acute aquatic toxicity)	1

1,2-Benzisothiazolin-3-on
Concentration: ≥ 0,0025 - ≤ 0,025 %
CAS-Number: 2634-33-5
EC-Number: 220-120-9
INDEX-No.: 613-088-00-6
Registrationnumber: 01-2120761540-60

GHS classification EC:

Acute toxicity	Category 4	H302
Fatal ifinhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 2	H411

Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1)
Concentration: ≥ 0,0002 - ≤ 0,0015 %
CAS-Number: 55965-84-9
EC-Number: 611-341-5
INDEX-No.: 613-167-005
Registrationnumber: 01-2120764691-48

GHS classification EC:

Acute toxicity	Category 3	H301
Acute toxocity	Category 2	H310
Fatal ifinhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314
May cause an alergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category1	H410

The text of H-phrases is shown in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Discription of first aid measures

General information:
Get medical advice/ attention if you feel unwell.

After inhalation:
Move the victim to fresh air.
If you feel unwell, seek medical advice (show the label where possible).

After contact with skin:
In case of contact with skin, clean with plenty of soap and water.

After contact with eyes:
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion:
If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed symptoms

Symptoms:
None known.

Hazards:
None known.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment:
Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:
Water spray jet
Dry powder
Carbon dioxide (CO_2)
Alcohol resistant foam

Extinguishing media that must not be used for safety reasons:
High volume water jet

5.2. Special hazards arising from the substance or mixture

In case of fires, hazardous combustion gases are formed:
Carbon oxides (CO_x)
Nitrogen oxides (NO_x)

5.3. Advice for firefighters

Special protective equipment for firefighting:
Use self-contained breathing apparatus.

Further information:
Wear suitable protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable personal protective equipment.

6.2. Environment precautions

The product should not be allowed to enter drains, water courses or the soil.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

Additional information:
Information regarding safe handling, see chapter 7.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling:
When used and handled appropriately no special measures are needed.

Hygiene measures:
Wash hands before breaks and at the end of workday.
Use protective skin cream before handling the product.
Take off immediately all contaminated clothing and wash it before reuse.

Advice on protection against fire and explosion:
Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:
Keep containers tightly closed in a cool, well-ventilated place.
Handle and open container with care.
Keep away from flames and sparks.

Storage stability:
Minimum 36 months.

7.3. Specific end use(s)

No further recommendations.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values:
Exposure limit values are not available.

DNEL / DMEL-values:
C.I. Pigment White 6
EC-Number: 236-675-5
CAS-Number: 13463-67-7

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	10 mg/m³	DNEL
Oral	Consumers	Long-term systemic effects	700 mg/kg bw/day	DNEL

1,2-Benzisothiazol-3(2H)-one
EC-Number: 220-120-9
CAS-Number: 2634-33-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	6,81 mg/m³	DNEL
Dermal	Workers	Long-term systemic effects	0,966 mg/kg bw/day	DNEL
Inhalation	Consumers	Long-term systemic effects	1,2 mg/m³	DNEL
Dermal	Consumers	Long-term systemic effects	0,345 mg/kg bw/day	DNEL

Amorphous silicon dioxide
EC-Number: 231-545-4
CAS-Number: 7631-86-9

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	4 mg/m³	DNEL

Propylene Glycol
EC-Number: 200-338-0
CAS-Number: 57-55-6

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	168 mg/m³	DNEL
Inhalation	Workers	Long-term local effects	10 mg/m³	DNEL
Inhalation	Consumers	Long-term systemic effects	50 mg/m³	DNEL
Inhalation	Consumers	Long-term local effects	10 mg/m³	DNEL
Skin contact	Consumers	Long-term systemic effects	213 mg/m³	
Ingestion	Consumers	Long-term systemic effects	85 mg/m³	

PNEC-values:

C.I. Pigment White 6
EC-Number: 236-675-5
CAS-Number : 13463-67-7

Environmental compartment	Value
Fresh water	0,184 mg/l
Fresh water sediment	1000 mg/kg dry weight (d.w.)
Marine water	0,0184 mg/l
Marine sediment	100 mg/kg dry weight (d.w.)
Soil	100 mg/kg dry weight (d.w.)
Sewage treatment plant	100 mg/l
Water (intermittent release)	0,193 mg/l

Propylene Glycol
EC-Number: 200-338-0
CAS-Number: 57-55-6

Environmental compartment	Value
Fresh water	260 mg/l
Marine water	26 mg/l
Water (intermittent release)	183 mg/l
Sewage treatment plant	20000 mg/l
Fresh water sediment	572 mg/kg dry weight (d.w.)
Marine sediment	57,2 mg/kg dry weight (d.w.)
Soil	50 mg/kg dry weight (d.w.)

1,2-Benzisothiazol-3(2H)-one
EC-Number: 220-120-9
CAS-Number: 2634-33-5

Environmental compartment	Value
Fresh water	0,00403 mg/l
Marine water	0,000403 mg/l
Intermittend use/release	0,0011 mg/l

Sewage treatment plant	1,03 mg/l
Fresh water sediment	0,0499 mg/kg dry weight (d.w.)
Marine sediment	0,00499 mg/kg dry weight (d.w.)
Soil	3 mg/kg dry weight (d.w.)

Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
EC-Number: 611-341-5
CAS-Number: 55965-84-9

Environmental compartment	Value
Fresh water	0,049 µg/l
Marine water	0,0098 µg/l
Sewage treatment plant	0,045 µg/l
Soil	0,009 µg/l

8.2. Exposure controls

Appropriate engineering controls:
Handle only in a place equipped with local exhaust (or other appropriate exhaust).

General protective measures:
Wear suitable protective equipment.

Respiratory protection:
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection:
Nitrile rubber
Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection:
Safety glasses

Body protection:
Wear suitable protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Form:	liquid
Colour:	white
Odour:	not significant
Odour threshold:	not required
pH value:	not measured
Melting point:	not applicable
Boiling point:	approx. 100 °C
Flash point:	> 100 °C
Evaporation rate:	not determined
Flammability:	not determined
Lower explosion limit:	not determined
Upper explosive limit:	not determined
Combustion number:	not applicable
Minimum ignition energy:	not determined
Vapour pressure:	not determined
Vapour density relative to air:	not determined
Relative Density:	no data available
Solubility in water:	miscible
Octanol/ water partition coefficient (log Pow):	not determined

Ignition temperature:	not determined
Thermal decomposition:	> 100 °C
Viscosity (dynamic):	not tested
Oxidizing properties:	no data available

9.2. Other information

Density:	1,80 g/cm³ (20 °C)

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
No dangerous reaction known under conditions of normal use.

10.2. Chemical Stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.
Stable.

10.4. Conditions to avoid
None known.

10.5. Incompatible Materials
No data available.

10.6. Hazardous decomposition products
No decomposition if stored and applied as directed.

SECTION 11: TOXICOLOGIC INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Informations related to the product:

Acute oral toxicity:	Remarks: no data available
Acute inhalation toxicity:	Remarks: no data available
Acute dermal toxicity:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Acute oral toxicity:	LD50 (Rat, male and female): 670 - 784 mg/kg Method: OECD Test Guideline 401 GLP: yes
Acute inhalation toxicity:	LC50 (Rat, male and female): 0,5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OPPTS 870.1300 GLP: yes
Acute dermal toxicity:	LD50 (Rat, male and female): > 2.000 mg/kg GLP: yes Assessment: The substance or mixture has no acute dermal toxicity.

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Acute oral toxicity:	LD50 (Rat): 64 mg/kg
Acute inhalation toxicity:	LC50 (Rat, male and female): 0,171 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity:	LD50 (Rabbit): 92,4 mg/kg

Skin corrosion/irritation

Informations related to the product:

Species:	EPISKIN Human Skin Model Test Method: OECD Test Guideline 439 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition.
Species:	Rabbit Method: OECD Test Guideline 404 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition.

Informations related to the component Alcohols, C16-18 and C18-unsaturated, ethoxylated:

Result:	Irritating to skin.

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Species:	Rabbit Exposure time: 4 h Result:Irritating to skin. GLP:yes

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Species:	Rabbit Result:Causes burns.

Serious eye damage/eye irritation

Informations related to the product:

Species:	Bovine cornea Method: OECD Test Guideline 437 Result: No eye irritation Remarks: The toxicological data has been taken from products of similar composition.
Species:	rabbit eye Method: OECD Test Guideline 405 Result: No eye irritation Remarks: The toxicological data has been taken from products of similar composition.

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Species:	rabbit eye Exposure time: 2,9 h - 11 d Result:Risk of serious damage to eyes. GLP: yes

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Species:	rabbit eye Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Informations related to the product:

Remarks:	no data available

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Test Type:	Guinea pig maximization test Exposure routes: Dermal
Species:	Guinea pig Method: Other

ResulT: May cause sensitisation by skin contact.
GLP: yes

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Species: Guinea pig
Method: Other
Result: The product is a skin sensitiser, sub-category 1A.
Assessment: Toxic if swallowed, Fatal in contact with skin, Fatal ifinhaled, Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

Germ cell mutagenicity

Informations related to the product:

Genotoxicity in vitro: Remarks: no data available

Germ cell mutagenicity-Assessment: No information available.

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Genotoxicity in vitro: Test Type: Mouse lymphoma assay
Test system: mouse lymphoma cells
Concentration: 0,1 - 12,8 µg/ml

Metabolic activation: with and without metabolic activation: Method: OECD Test Guideline 476
Result: negative
GLP: yes
Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 0,064 - 200 µg/plate

Metabolic activation: with and without metabolic activation: Method: OECD Test Guideline 471
Result: negative
GLP: yes
Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Concentration: 1 - 40 µg/ml

Metabolic activation: with and without metabolic activation: Method: OECD Test Guideline 473
Result: positive
GLP: yes

Genotoxicity in vivo: Test Type: Other
Species: Rat (male)
Strain: wistar
Cell type: Liver cells
Application Route: Ingestion
Exposure time: single dose
Dose: 560 - 1400 mg/kg
Method: OECD Test Guideline 486
Result: negative
GLP: yes

Test Type: Micronucleus test
Species: Mouse (male and female)
Strain: CD1

Cell type: Bone marrow
Application Route: Ingestion
Exposure time: single dose
Dose: 125-250-500-1000-2000-5000mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Germ cell mutagenicity-
Assessment: Did not show mutagenic effects in animal experiments.

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Genotoxicity in vitro: Test Type: In vitro study
Metabolic activation:
with and without metabolic activation: Result: Conflicting results have been seen in different studies.

Genotoxicity in vivo: Test Type: Micronucleus test
Species: Rat
Cell type: Bone marrow
Application Route: Oral
Exposure time: ≤ 5 d
Dose: 1-5 x ≤ 28 mg/kg
Result: negative

Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Exposure time: ≤ 5 d
Dose: 1-5 x ≤ 20 - 30 mg/kg
Result: negative

Germ cell mutagenicity-
Assessment: In vivo tests did not show mutagenic effects

Carcinogenicity

Informations related to the product:

Carcinogenicity -
Assessment: No information available.

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Carcinogenicity -
Assessment: Not applicable

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Carcinogenicity -
Assessment: No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Informations related to the product:

Reproductive toxicity -
Assessment: No information available.

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Effects on fertility: Species: Rat, male
Application Route: oral (fed)
Dose: 18,5 - 97,8 mg/kg
General Toxicity - Parent: NOAEL: 18,5 mg/kg body weight
General Toxicity F1: NOAEL: 48 mg/kg body weight

Method: Other
GLP: yes

Species: Rat, female
Application Route: oral (feed)
Dose: 27,0 - 114,8 mg/kg
General Toxicity - Parent: NOAEL: 27 mg/kg body weight
General Toxicity F1: NOAEL: 56,6 mg/kg body weight
Method: Other
GLP: yes

Effects on foetal development: Species: Rat, female
Application Route: oral (gavage)
Dose: 10 - 40 - 100 mg/kg
General Toxicity Maternal: NOAEL: 10 mg/kg body weight
Teratogenicity: NOAEL: 40 mg/kg body weight
Method: Directive 67/548/EEC, Annex V, B.31.
GLP: yes

Reproductive toxicity – Assessment: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.
Embryotoxicity classification not possible from current data.

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Effects on fertility: Species: Rat, male and female
Application Route: Drinking water
Dose: 25 - 75 - 225 ppm
General Toxicity - Parent: NOAEL: 16,3 - 24,7 mg/kg body weight
General Toxicity F1: NOAEL: 16,3 - 24,7 mg/kg body weight
Method: Other
GLP: yes

Species: Rat, male and female
Application Route: Drinking water
Dose: 30 - 100 - 300 ppm
General Toxicity - Parent: NOAEL: 2,8 - 4,4 mg/kg body weight
General Toxicity F1: NOAEL: 22,7 - 28 mg/kg body weight
General Toxicity F2: NOAEL: 35,7 - 39,1 mg/kg body weight
Method: OECD Test Guideline 416
GLP: yes

Effects on foetal development: Species: Rat, male and female
Application Route: oral (gavage)
Dose: ≤ 15 mg/kg

Developmental Toxicity: NOAEL: 15 mg/kg body weight
Method: Other
Species: Rat, male and female
Application Route: oral (gavage)
General Toxicity Maternal: NOAEL: ≤ 3,95 mg/kg body weight
Method: Other

Reproductive toxicity – Assessment: Weight of evidence does not support classification for reproductive toxicity

Embryotoxicity classification not possible from current data.

STOT - single exposure

Informations related to the component product:

Remarks: no data available

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Informations related to the component product:

Remarks: no data available

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Informations related to the product:

Remarks: This information is not available.

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Species: Dog, male and female
NOAEL: 5 mg/kg
LOAEL: 20 mg/kg
Application Route: oral (gavage)
Exposure time: 90 d
Number of exposures: daily
Dose: 5 - 20 - 50 mg/kg
Group: yes
Method: 88/302/EC
GLP: yes

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Species: Rat, male and female
NOAEL: 16,3 - 24,7 mg/kg
ApplicationRoute: Drinking water
Exposure time: 90 d
Number of exposures: daily
Dose: 25 - 75 - 225 ppm
Group: yes
Method: Other
GLP: yes

Aspiration toxicity

Informations related to the product:

no data available

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:
No aspiration toxicity classification

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):
No aspiration toxicity classification

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Informations related to the product:

Toxicity to fish:	Remarks: no data available
Toxicity to daphnia and other aquatic invertebrates:	Remarks: no data available
Toxicity to algae:	Remarks: no data available
Toxicity to fish (Chronic toxicity):	Remarks: no data available
Toxicity to microorganisms:	Remarks: no data available

Informations related to the component Alcohols, C16-18 and C18-unsaturated, ethoxylated:

M-Factor (Acute aquatic toxicity):	1
Ecotoxicology Assessment	
Acute aquatic toxicity:	Very toxic to aquatic life.
Chronic aquatic toxicity:	Harmful to aquatic life with long lasting effects.

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Toxicity to fish :	LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes
	LC50 (Cyprinodon variegatus (sheepshead minnow)): approx.16,7 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: No information available. GLP: yes
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 2,94 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
	EC0 (Daphnia magna (Water flea)): 0,643 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
	EC50 (Mysidopsis bahia (opossum shrimp)): 0,9893 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other

GLP: yes
Remarks: salt water

NOEC (Mysidopsis bahia (opossum shrimp)): 0,25 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: Other
GLP: yes
Remarks: salt water

Toxicity to algae:

EC50 (Selenastrumc apricornutum (green algae)): 0,155 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

NOEC (Selenastrum capricornutum (green algae)): 0,055 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

M-Factor (Acute aquatic toxicity): 1

Toxicity to microorganisms:

EC50 (activated sludge of a predominantly domestic sewage): 23 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: aquatic
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

EC50: > 811,5 mg/kg dry weight (d.w.)
Exposure time: 28 d
Test Type: Soil
Analytical monitoring: yes
Method: OECD 216
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

NOEC: 263,7 mg/kg dry weight (d.w.)
Exposure time: 28 d
Test Type: Soil
Analytical monitoring: yes
Method: OECD 216
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to fish (Chronic toxicity):

NOEC: 0,21 mg/l
Exposure time: 28 d

Species: Oncorhynchus mykiss (rainbow trout)
Analytical monitoring: yes
Method: OECD Test Guideline 215
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: 1,2 mg/l
End point: Reproduction rate
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes

NOEC: 1,9 mg/l
End point: Reproduction rate
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes

Toxicity to soil dwelling organisms:

Test Type: artificial soil
LC50: > 410,6 mg/kg
Exposure time: 14 d
End point: mortality
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Test Type: artificial soil
NOEC: 234,5 mg/kg
Exposure time: 14 d
End point: mortality
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Plant toxicity:

EC50: 340 mg/kg
Exposure time: 20 d
End point: Growth
Species: Phaseolus vulgaris
Analytical monitoring: yes
Method: OECD Guide-line 208
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.

NOEC: 90 mg/kg
Exposure time: 20 d
End point: Growth
Species: Phaseolus vulgaris
Analytical monitoring: yes
Method: OECD Guide-line 208
GLP:yes

Remarks: The details of the toxic effect relate to the nominal concentration.

EC50: 300 mg/kg
Exposure time: 19 d
End point: Growth
Species: Triticum aestivm (wheat)
Analytical monitoring: yes
Method: OECD Guide-line 208
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

NOEC: 51 mg/kg
Exposure time: 19 d
End point: Growth
Species: Triticum aestivm (wheat)
Analytical monitoring: yes
Method: OECD Guide-line 208
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Sediment toxicity: Remarks: not available

Ecotoxicology Assessment

Acute aquatic toxicity: Very toxic to aquatic life.

Chronic aquatic toxicity: Toxic to aquatic life with long lasting effects.

<u>Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):</u>

Toxicity to fish: EC50 (Oncorhynchus mykiss (rainbow trout)): 0,22 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 0,1 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae: EC50 (Skeletonema costatum (marine diatom)): 0,0052 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 201

NOEC (Skeletonema costatum (marine diatom)): 0,00049 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity): 100

Toxicity to microorganisms: EC50 (activated sludge): 7,92 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity): NOEC: 0,098 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 215

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0,004 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
M-Factor (Chronic aquatic toxicity):	10
Toxicity to soil dwelling organisms:	LC50: 86,6 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207
	NOEC: 8,83 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) OECD Test Guideline 207
Ecotoxicology Assessment	
Acute aquatic toxicity:	Very toxic to aquatic life.
Chronic aquatic toxicity:	Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Informations related to the product:

Biodegradability:	no data available

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Biodegradability:	Test Type: aerobic Inoculum: activated sludge Concentration: 1 mg/l Result: Partially biodegradable. Exposure time: 63 d Method: OECD Test Guideline 301C GLP: yes
Physico-chemical removability:	Remarks: Biodegradable
Stability in water:	Test Type: abiotic Degradation half life: 219 d pH: 4 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
	Test Type: abiotic Degradation half life: > 200 d pH: 7 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
	Test Type: abiotic Degradation half life: 145 d pH: 9 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
Photodegradation:	Test Type: water Light source: Xenon lamp Light spectrum: 290 - 400 nm Degradation (direct photolysis): < 1,5 % GLP: yes

Test Type: air
Method: calculated
GLP: no
Remarks: Decomposes rapidly in contact with light.

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Biodegradability: Test Type: aerobic
Inoculum: activated sludge
Result: Not rapidly biodegradable
Method: OECD Test Guideline 301B

Photodegradation: Test Type: water
Light source: Sunlight

12.3. Bioaccumulative potential

Informations related to the product:

Bioaccumulation: no data available

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Bioaccumulation: Species: Lepomis macrochirus (Bluegill sunfish)
Exposure time: 56 d
Concentration: 0,1 mg/l
Bioconcentration factor (BCF): 6,62
Method: OECD Test Guideline 305
GLP: no
Remarks: Due to the distribution coefficient n-octanol/water,accumulation in organisms is not expected.

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Bioaccumulation: Bioconcentration factor (BCF): 3,6
Method: calculated
Remarks: Does not accumulate in organisms.

Partition coefficient n-octanol/water: log Pow: -0,71 - 0,75
Method: OECD Test Guideline 107

12.4. Mobility in soil

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Distribution among environmental compartments: Adsorption/Soil
Medium: water – soil
Koc: 235 – 566
Method: Other

12.5. Results of PBT and vPvB assessment

Informations related to the product:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1 % or higher.

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Assessment: The substance is not identified as a PBT or as a vPvB substance.

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

12.6. Other adverse effects

Informations related to the product:

Environmental fate and pathways: no data available

Additional ecological information: no data available

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

Environmental fate andpathways: not available

Additional ecological information: Do not allow to enter ground water, waterways or waste water.

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Additional ecological information: The product should not be allowed to enter drains, watercourses or the soil.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product:

Dispose of in accordance with the European Directives on waste and hazardous waste.

Uncleaned packaging:

This material and its container must be disposed of in a safe way.

SECTION 14: TRANSPORT INFORMATION

14.1. to 14.5.

ADR: not restricted
ADN: not restricted
RID: not restricted
IATA: not restricted
IMDG: not restricted

14.6. Special precautions for users

See sections 6 to 8 of this Safety Data Sheet.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No transport as bulk according IBC-Code.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

REACH - List of substances subject to authorisation (Annex XIV): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

15.2. Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

SECTION 16: OTHER INFORMATION

Observe the legal requirements nationally and locally.

List of the text of the hazard statements mentioned section 3 (H-phrases):

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.:	Acute toxicity
Aquatic Acute:	Short-term (acute) aquatic hazard
Aquatic Chronic:	Long-term (chronic) aquatic hazard
Eye Dam.:	Serious eye damage
Skin Corr.:	Skin corrosion
Skin Irrit.:	Skin irritation
Skin Sens.:	Skin sensitisation
STOT RE:	Specific target organ toxicity - repeated exposure

Change compared to the previous version:

Change in the composition

Legend

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ASTM	American Society for the Testing of Materials
bw	Body weight
CLP	Classification Labelling Packaging Regulation Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DIN	Standard of the German Institute for Standardisation
DMEL	Derived Minimal Effect Level (genotoxic substances)
DNEL	Derived No Effect Level
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC-Number	European Community number
ECx	Concentration associated with x% response
ELx	Loading rate associated with x% response
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
ErCx	Concentration associated with x% growth rate response
GHS	Globally Harmonized System
GLP	Good Laboratory Practice
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50	Half maximal inhibitory concentration
ICAO	International Civil Aviation Organization

IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISHL	Industrial Safety and Health Law (Japan)
ISO	International Organisation for Standardization
KECI	Korea Existing Chemicals Inventory
LC50	Lethal Concentration to 50 % of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
n.o.s.	Not Otherwise Specified
NO(A)EC	No Observed (Adverse) Effect Concentration
NO(A)EL	No Observed (Adverse) Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Co-operation and Development
OPPTS	Office of Chemical Safety and Pollution Prevention
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
(Q)SAR	(Quantitative) Structure Activity Relationship
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SADT	Self-Accelerating Decomposition Temperature
SDS	Safety Data Sheet
TCSI	Taiwan Chemical Substance Inventory
TRGS	Technical Rule for Hazardous Substances
TSCA	Toxic Substances Control Act (United States)
UN	United Nations
vPvB	Very Persistent and Very Bioaccumulative

Decimal notation: "thousands" places are identified with a dot (for example, "2.000 mg/kg" means "two thousand mg/kg"). Decimal places are identified with a comma (for example, "1,35 g/cm^3" means "one point three five g/cm^3").
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